

# Accuphase P-250

DUAL CHANNEL POWER AMPLIFIER



It is a mistake to calculate the value of a power amplifier solely in terms of \$/power or cost/power. Other more important factors should also be considered to assess its overall value such as those power qualities like low distortion, well-regulated power supply and power bandwidth, as well as additional functions and appearance values.

The deep reverberating sound quality and expression of music detail that is heard through an extra powerful amplifier can be far more dynamic and inspiring than sound from an ordinary amplifier. However, powerful amplifiers that may sound good at high volume levels often fail to sound as well at low listening levels. This is because technically, the higher the power, the more difficult it becomes to capture clearly the very soft, delicate passages of music. The "difference" in Accuphase sound becomes readily apparent during reproduction of such soft passages, or

when listening at low volume, since the P-250, like other Accuphase amplifiers, was designed to ensure clear, clean sound quality at ALL listening levels.

There has been much discussion recently concerning amplifier and speaker connections and the harmonious relation between them. This can be said to reflect the feeling of a growing number of audiophiles that more could be done by amplifier manufacturers to make their products better able to induce the maximum potential performance from any speaker, and enhance a speaker's characteristic tonal qualities. The Speaker Damping Control feature of the Accuphase P-250 is a perfect answer to this question as it can change the speaker damping factor quickly, and thus reveal a speaker's maximum sound reproducing capabilities and characteristic tonal qualities immediately.



# Accuphase P-250

## DUAL CHANNEL POWER AMPLIFIER

### \*High power output of 100 watts per channel into 8 ohms with clean sound quality at ALL listening levels.

This high power capability, with distortion at less than 0.1% from 20 to 20,000 Hz is fully guaranteed. Heavy duty power transistors in a parallel push-pull drive output stage and large heat sinks back up this Accuphase warranty.

High power amplifiers need an especially reliable power supply that must not only provide the energy to drive the speakers, but the capacity to store and deliver adequate power to trace the sharpest fluctuating signal. The P-250 has just such a power supply with an oversize power transformer and two giant 20,000 $\mu$ F filter capacitors that can easily supply the energy required to deliver 280 watts of continuous power into 4 ohms. A severe rise in distortion when volume is reduced to low levels is a problem with many high power amplifiers, but not so with the P-250 in which such distortion has been eliminated to the lowest possible limit. It permits enjoyment of clean, clear pianissimo passages at ALL volume levels.

### \*Speaker Damping Control enhances characteristic tonal qualities of speakers.

The damping factor of solid state amplifiers is generally very large and ideal for damping the speakers. However, some speakers require an amplifier with a low damping factor to reproduce rich, full-bodied sound. The P-250 has a Speaker Damping Control which permits choice of three damping factors and induces maximum potential performance from any speaker. Damping factor with an 8-ohm load becomes more than 20 when this control is set to NORMAL. Likewise, it is 5 at MEDIUM position, and 1 at SOFT position. It enables choosing the speaker sound that one prefers.

### \* Foolproof protection Circuit safeguards power transistors and speakers.

The P-250 has a built-in Protection Circuit which guards against damage to speakers or power transistors in case of shorts when the speakers are connected, or when abnormally low impedance output load connections are made. If the speakers are shorted, this circuit automatically cuts them from the amplifier.

### \* Large size power meters.

Large size power meters indicate power output in decibels (dB). The meters also provide indications to read output power level directly in watts. Switch selection of three ranges, 0dB, -10dB and -20dB, permit both low and high power measurement. A 0dB reading indicates power output of 100 watts into 8 ohms when the meter range switch is set to 0dB.

### \*Plenty of INPUT/OUTPUT terminals.

Plenty of outputs are available to which three pairs of stereo speakers can be connected, and switch selected. Accommodations for two pairs of input systems are also provided, and they too can be switch selected. One pair of input system is provided on the front sub-panel for easy access.

## GUARANTY SPECIFICATIONS

### PERFORMANCE GUARANTY:

Products of Accuphase guarantee specifications stated.

### POWER OUTPUT:

140 RMS Watts continuous per channel into 4 ohms  
100 RMS Watts continuous per channel into 8 ohms  
50 RMS Watts continuous per channel into 16 ohms  
(with both channels operating simultaneously at any frequency from 20Hz to 20,000Hz)

### HARMONIC DISTORTION:

will not exceed 0.1% at rated power output  
will not exceed 0.05% at half of rated power output  
will not exceed 0.1% at 50mW  
(at any frequency from 20Hz to 20,000Hz)

### INTERMODULATION DISTORTION:

will not exceed 0.1% at rated power output for any combination of frequencies between 20Hz and 20,000Hz

### FREQUENCY RESPONSE:

20Hz to 20,000Hz: +0, -0.2dB at rated power output  
5Hz to 90,000Hz: +0, -3 dB at rated power output

### SLEWING RATE:

more than 15 V/ $\mu$ S

### DAMPING FACTOR:

(at 8 ohms load, 20Hz to 20,000Hz)  
with "SPEAKER DAMPING" switch set to:  
"NORMAL" "MEDIUM" "SOFT"  
20 5 1

### INPUT SENSITIVITY AND IMPEDANCE:

1.0 Volt, 100 k ohms, for rated output at the maximum level control

### HUM AND NOISE:

94dB below rated output

### POWER LEVEL METER:

Meter is calibrated to read 0dB when amplifier produces 100 watts into 8 ohms load.  
METER RANGE switch is provided to increase meter sensitivity by 10dB or 20dB.

### OUTPUT LOAD IMPEDANCE:

4, 8 and 16 ohms

### AUDIO BANDPASS FILTER:

cutoff frequency: LOW, 17Hz 18dB/oct  
HIGH, 24kHz 18dB/oct

### HEADPHONE JACK:

For listening with low impedance (4-32 ohms) dynamic stereo headphones

### POWER REQUIREMENT:

Voltage selector for 100V, 117V, 220V, 240V 50/60Hz operation  
Consumption: 70 watts at zero signal output  
375 watts at rated power output into 8 ohms load

### SEMICONDUCTOR COMPLEMENT:

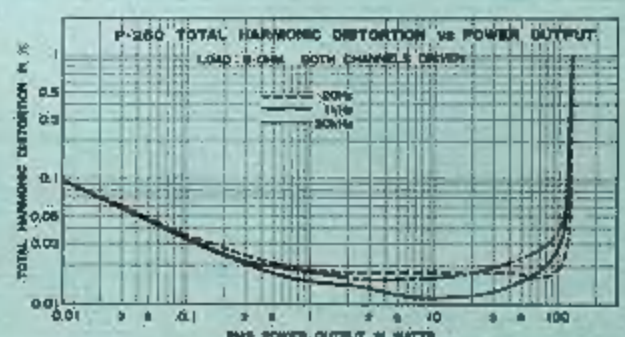
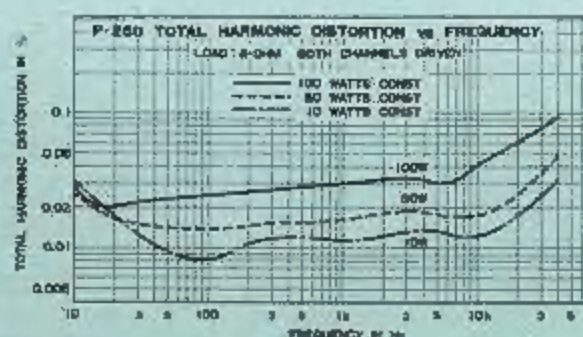
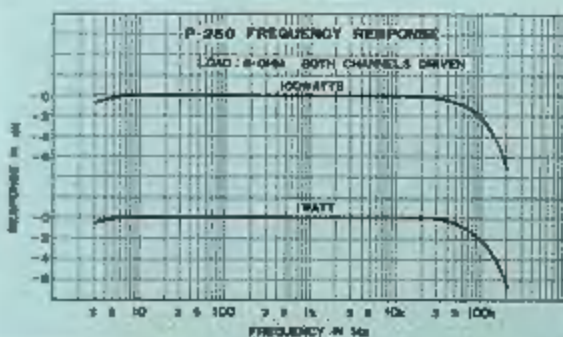
36 Transistors, 34 Diodes

### DIMENSIONS:

445mm (17 1/2 in.) wide, 152mm (6 in.) high, 355mm (14 in.) deep

### WEIGHT:

19.5 kgr. (42.9 lbs.) net, 23.8 kgr. (52.3 lbs.) in shipping carton.



**Accuphase**  
KENSonic LABORATORY INC.



# **GUARANTY SPECIFICATIONS**

## **PERFORMANCE GUARANTY:**

Products of Accuphase guarantee specifications stated.

**POWER OUTPUT:** (both channels driven from 20Hz to 20,000Hz with no more than 0.1% total harmonic distortion):  
140 watts per channel, min. RMS, at 4 ohms  
100 watts per channel, min. RMS, at 8 ohms  
50 watts per channel, min. RMS, at 16 ohms

**TOTAL HARMONIC DISTORTION:** (from 20Hz to 20,000Hz at any power output from 1/4 watt to rated power)  
4 ohms; 0.1% max.  
8 ohms; 0.1% max.  
16 ohms; 0.1% max.

## **INTERMODULATION DISTORTION:**

will not exceed 0.1% at rated power output for any combination of frequencies between 20Hz and 20,000Hz

## **FREQUENCY RESPONSE:**

20Hz to 20,000Hz; +0, -0.2dB at rated power output  
5Hz to 90,000Hz; +0, -3 dB at rated power output

**SLEWING RATE:** more than 15 V/ $\mu$ S

**DAMPING FACTOR:** (8 ohms load at 40Hz)  
with "SPEAKER DAMPING" switch set to:  
"NORMAL" "MEDIUM" "SOFT"  
50 5 1

## **INPUT SENSITIVITY AND IMPEDANCE:**

1.0 Volt, 100 k ohms, for rated output at the maximum level control

**HUM AND NOISE:** 94dB below rated output

## **POWER LEVEL METER:**

Meter is calibrated to read 0dB when amplifier produces 100 watts into 8 ohms load.

METER RANGE switch is provided to increase meter sensitivity by 10dB or 20dB.

**OUTPUT LOAD IMPEDANCE:** 4, 8 and 16 ohms

## **AUDIO BANDPASS FILTER:**

cutoff frequency; LOW, 17Hz 18dB/oct  
HIGH, 24kHz 18dB/oct

## **HEADPHONE JACK:**

For listening with low impedance (4-32 ohms) dynamic stereo headphones

## **POWER REQUIREMENT:**

Voltage selector for 100V, 117V, 220V, 240V 50/60Hz operation

Consumption; 70 watts at zero signal output  
375 watts at rated power output into 8 ohms load

**SEMICONDUCTOR COMPLEMENT:** 36 Transistors, 34 Diodes

## **DIMENSIONS:**

445mm(17½ in.)wide, 152mm(6 in.)high, 355mm(14 in.)deep

## **WEIGHT:**

19.5 kgr.(42.9 lbs.) net, 23.8 kgr.(52.3 lbs.) in shipping carton.